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(71) Applicant (for all designated States except US): **THE REGENTS OF THE UNIVERSITY OF CALIFORNIA** [US/US]; 1111 Franklin Street, 12th Floor, Oakland, CA 94607-5200 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **VERBAUWHEDE,**

Ingrid, M. [US/US]; 1123 23rd Street #C, Santa Monica, CA 90403 (US). **TIRI, Kris, J.V.** [BE/BE]; De Hutten 16, B-3600 Genk (BE).

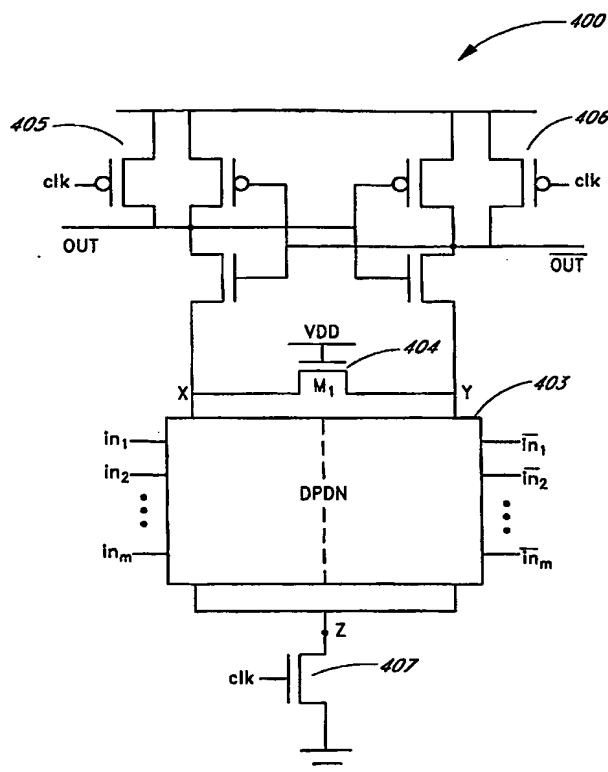
(74) Agent: **ALTMAN, Daniel, E.**; Knobbe, Martens, Olson and Bear, LLP, 2040 Main Street, Fourteenth Floor, Irvine, CA 92614 (US).

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(54) Title: A DYNAMIC AND DIFFERENTIAL CMOS LOGIC WITH SIGNAL-INDEPENDENT POWER CONSUMPTION TO WITHSTAND DIFFERENTIAL POWER ANALYSIS



(57) Abstract: A dynamic and differential CMOS logic style is disclosed in which a gate uses a fixed amount of energy per evaluation event. The gate switches its output at every event and loads a constant capacitance. The logic style is a Dynamic and Differential Logic (DDL) style. The DDL style logic typically has one charging event per clock cycle and the charging event does not depend on the input signals. The differential feature masks the input value because a precharged output nodes is discharged during the evaluation phase. The dynamic feature breaks the input sequence: the discharged node is charged during the subsequent precharge phase.



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